

DETAILED ACTION

1. This is in response to the remarks filed on January 12th, 2009. Claims 1-34 are pending and have been considered below.

Response to Arguments

2. Applicant's arguments (see "Miscellaneous Incoming Letter", filed 11/12/08), with respect to the previous Office Action dated 06/19/08 have been fully considered and are persuasive. Therefore, the previous rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Stork et al. (6,212,296).

3. The Examiner notes that, as discussed between the *previous* Examiner and the Applicant during a telephonic interview, the *previous* Examiner rejected the wrong set of claims in the first action on the merits, and thus necessitated the current Office Action, which is in light of the actual claims of the Applicant's invention.

Claim Objections

4. **Claim 33** is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 31. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 20-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 20-34 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of *In Re Bilski* 88 USPQ2d 1385. The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process. The method including steps of “*generating 3D motion data in response to a 3D motion...*” and “*deriving corresponding two-dimensional images...*” are broad enough that the claim could be completely performed mentally, verbally or without a machine nor is any transformation apparent. For example, one may physical and/or mentally record 3D motion data; and a human being may mentally determine corresponding two-dimensional images or the like.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Stork et al. (6,212,296).

Claims 1, 16 and 20: Stork et al. discloses a handwriting recognition system, comprising:

- a. an input device including a three-dimensional (3D) motion detection sensor that is configured to generate 3D motion data in response to a 3D motion [column 2, lines 39-49]; and
- b. a recognition device, in communication with the input device, that is configured to receive the 3D motion data and derive corresponding two-dimensional (2D) images for handwriting recognition, based on the 3D motion data [column 4, lines 33-45].

Claims 2, 17 and 21: Stork et al. discloses the system of claims 1, 16 and 20, wherein the recognition device includes means for performing 2D handwriting recognition based on the 2D images [column 8, lines 15-25].

Claims 3, 18 and 22: Stork et al. discloses the system of claims 1, 16 and 20, wherein the recognition device includes:

- a. means for calculating corresponding 3D coordinates based on the 3D motion data [column 5, lines 1-20];
- b. means for constructing corresponding 3D tracks based the 3D coordinates [column 5, lines 1-20]; and
- c. means for deriving the corresponding 2D images from the 3D tracks [column 4, lines 33-45].

Claims 4, 19 and 23: Stork et al. discloses the system of claim 3, 18 and 22, wherein the deriving means includes means for mapping the 3D tracks onto a 2D plane for deriving the 2D images for handwriting recognition [column 4, lines 33-45].

Claims 5 and 24: Stork et al. discloses the system of claims 3 and 22, wherein the recognition device includes means for performing 2D handwriting recognition based on the 2D images [column 9, lines 39-54].

Claims 6 and 25: Stork et al. discloses the system of claims 4 and 23, wherein the calculating means calculates the corresponding 3D coordinates of each sampling point based on the 3D motion data and a selected sampling rate [column 7, lines 5-12].

Claims 7 and 26: Stork et al. discloses the system of claims 6 and 25, wherein the recognition device further includes means for dynamically adjusting the sampling rate based on the speed of the motion [column 5, lines 45-50].

Claims 8 and 27: Stork et al. discloses the system of claims 6 and 25, wherein the deriving means includes means for deriving the 2D plane as a plane to which the sum of the distance square of each sampling point is minimal [column 7, lines 12-25].

Claims 9 and 28: Stork et al. discloses the system of claims 3 and 22, wherein the input device further includes a control circuit, responsive a user's command, that is configured to generate a control signal for transmitting to the recognition device to indicate completion of writing a word or a character [column 3, lines 22-30].

Claims 10 and 29: Stork et al. discloses the system of claims 3 and 22, wherein the motion detection sensor measures acceleration of the 3D motion in X, Y and Z axial directions to generate the 3D motion data [column 3, lines 11-21].

Claims 11 and 30: Stork et al. discloses the system of claims 5 and 24, further comprising an output device for displaying final results of the handwriting recognition [column 4, lines 18-24].

Claim 12: Stork et al. discloses the system of claim 1, wherein the input device further includes a control circuit, responsive a user's command, that is configured to generate a control signal for transmitting to the recognition device to indicate completion of writing a word or a character [column 3, lines 22-30].

Claims 13 and 32: Stork et al. discloses the system of claims 1 and 20, wherein the motion detection sensor measures acceleration of the 3D motion in X, Y and Z axial directions to generate the 3D motion data [column 3, lines 11-21].

Claims 14, 31 and 33: Stork et al. discloses the system of claims 1 and 20, wherein the input device wirelessly transmits the 3D motion data to the recognition device [column 2, lines 31-39].

Claims 15 and 34: Stork et al. discloses the system of claims 1 and 20, wherein the recognition device includes means for performing 2D handwriting recognition based on the 2D images [column 8, lines 15-25].

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are all related to various techniques of three-dimensional handwriting recognition inventions: Gounares et al. (2003/0215140), Kasabach et al. (6,628,847), Ikebata (6,226,404) and Minakata (5,568,565).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD ZEE whose telephone number is (571)270-1686. The examiner can normally be reached on Monday through Thursday 9:00AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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EZ
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